

NATURAL RESOURCES CONSERVATION SERVICE

DOCUMENTATION REQUIREMENTS FOR

STRUCTURE FOR WATER CONTROL

CODE 587

In Kansas, two types of structures are used for water control under this conservation practice. One type is a rock check dam constructed of rock riprap material. The second type is a prefabricated inline water level control structure.

Design Survey Applicable To All Types

Record survey data on Forms NRCS-ENG-28, Loose Leaf Field Sheet, and NRCS-ENG-29, Loose Leaf Field Sheet, or [Form KS-ENG-37 and KS-ENG-37a, Field Notes](#). Record the information indicated below.

- Identification information.
- Profile survey notes—Take readings along the centerline of the channel at all significant changes in slope and direction but do not exceed 100 feet between shots. Start the survey at least 100 feet upstream from the uppermost structure site and extend it at least 100 feet downstream of the lowermost structure site.
- Cross section survey notes—Take a cross section along the centerline of each proposed structure site. The cross sections should extend to an elevation above the expected high water mark during the passage of the design storm.
- Elevation and description of the benchmark that you set for each structure.

If foundation soil borings are to be performed on-site, Kansas One-Call must be notified in advance at 800-344-7233 or 811 in accordance with instructions in [National Engineering Manual \(NEM\) Sections 503.0 through 503.6](#) and [NEM Part KS503](#).

Complete a test hole log of each soil boring at the structure site (if required for sound

construction). [Form NRCS-ENG-533, Log of Test Holes](#), can be used in lieu of recording this information in the field notes.

While in the field completing the survey, check for signs of utilities in the construction area. If utilities are known to exist, safety procedures listed in [NEM Sections 503.0 through 503.6](#) and [NEM Part KS503](#) should be strictly followed.

Design and layout. Design criteria are listed in [Conservation Practice Standard](#) and [Construction Specifications 587, Structure for Water Control](#), as well as [Kansas Engineering Technical Note No. KS-6, Rock Check Dam Planning, Design, and Construction](#).

Any future national technical guidance issued on rock check dams will need to be considered in the design of structures for water control.

Record the following design documentation on [Form KS-ENG-444, Reinforced Concrete Box Drop Spillway Design](#), or an equivalent:

- In the title block enter the following:
 - Name of landowner
 - Legal description of field
 - County name
- Obtain signature in the "Designed," "Drawn," "Checked," and "Approved" blocks and enter the respective dates.
- Complete a location map, showing the location of the structure and any other pertinent features such as waterways, streams, roads, farmsteads, utilities, etc.
- List the scale of the location map.
- Complete the "Stations" and "Elevations."

Rock Check Dams

Standard plans will be used where applicable.

Structures of this type will be constructed from rock. This section does not apply to structures fabricated from concrete, masonry, concrete block, steel, aluminum, plastic, or treated wood.

Construction. During construction of the structures, periodic inspections need to be made by Natural Resources Conservation Service (NRCS) personnel.

An inspection needs to be made of the rock quality and gradation prior to placement of the rock.

An inspection of rock placement methods should also be made during construction.

Checkout. Perform profile surveys on the channel centerline and perpendicular to the channel centerline across the installed structure of control water.

Record the measured dimensions of each structure in survey notes and as-built notations on the original copies of the plan.

Record dates and signatures of persons checking out and auditing the checkout.

Inline Water Level Control Structure

Standard plans will be used where applicable. If not available, the plan must then be approved by an engineer having the appropriate approval authority.

Structures of this type will be constructed from plastic and aluminum. This section does not apply to structures fabricated from rock, masonry, concrete block, steel, or treated wood.

Construction. During construction of the structures, periodic inspections need to be made by NRCS personnel. At a minimum, an inspection needs to be made during placement of the pipe and the inline water control structure.

Checkout. Perform profile surveys on the channel centerline and perpendicular to the channel centerline across the installed structure for water control.

Record the measured dimensions of each structure in survey notes and as-built notations on the original copies of the plan.

Record dates and signatures of persons checking out and auditing the checkout.